It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

Amendments

In the Claims:

Please cancel claims 9, 10, 11-14, 15, 19-22, 42, 44, 45, 67, 70, 79, 80 and 81 without prejudice or disclaimer.

Please substitute the following claim 1 for the pending claim 1:

1. (Twice Amended) A method of treating cancer or metastasis thereof in a mammal, comprising:

administering into a muscle of a mammal a DNA plasmid comprising a polynucleotide which encodes interferon-alpha or an active fragment thereof, through operable association with a promoter;

wherein said DNA plasmid is administered free from *ex vivo* cells;

wherein said interferon alpha is expressed *in vivo*, and is present in the blood stream of said mammal in an amount effective to treat said cancer, or metastasis thereof.

Please substitute the following claim 3 for the pending claim 3:

B2

3. (Twice Amended) The method of claim 1, wherein said plasmid further comprises a polyadenylation signal and transcription termination signal in operable association with said polynucleotide.

Please substitute the following claim 7 for the pending claim 7:

B3

7. (Twice Amended) The method of claim 1, wherein said muscle tissue is skeletal muscle.

Please substitute the following claim 35 for the pending claim 35:

B4

35. (Twice Amended) The method of claim 1, wherein said DNA plasmid is dissolved in an aqueous solution.

Please substitute the following claim 38 for the pending claim 38:

B5

38. (Twice Amended) The method of claim 1, wherein said DNA plasmid is administered free from association with transfection-facilitating proteins, viral particles, liposomes, cationic lipids, and calcium phosphate precipitating agents.

Please substitute the following claim 39 for the pending claim 39:

39. (Twice Amended) The method of claim 1, wherein said DNA plasmid is administered as a complex of said DNA plasmid and one or more cationic compounds selected from the group consisting of cationic lipids, cationic peptides, cationic proteins, cationic polymers other than lipids or peptides, and mixtures thereof.

Please substitute the following claim 43 for the pending claim 43:

43. (Twice Amended) The method of claim 1, wherein said DNA plasmid further comprises a region regulating expression operably associated with said polynucleotide.

Please substitute the following claim 47 for the pending claim 47:

47. (Once Amended) The method of claim 46, wherein said DNA plasmid is administered prior to the commencement of said one or more additional cancer treatment methods.

Please substitute the following claim 48 for the pending claim 48:

48. (Once Amended) The method of claim 46, wherein said DNA plasmid is administered during the practice of said one or more additional cancer treatment methods.

Please substitute the following claim 49 for the pending claim 49:

49. (Once Amended) The method of claim 46, wherein said DNA plasmid is administered after the end of said one or more additional cancer treatment methods.

Please substitute the following claim 66 for the pending claim 66:

66. (Twice Amended) A method of treating cancer in a mammal, comprising: administering into the peritoneal cavity of said mammal a DNA plasmid comprising a polynucleotide which encodes interferon alpha or an active fragment thereof, through operable association with a promoter, wherein said DNA plasmid is administered free from *ex vivo* cells or *ex vivo* cellular material; and wherein said interferon alpha is delivered to a tumor, or metastases thereof, in a therapeutically effective amount.

Please substitute the following claim 69 for the pending claim 69:

69. (Once Amended) The method of 66, wherein said tumor disseminates in said peritoneal cavity.

Please substitute the following claim 71 for the pending claim 71:

71. (Once Amended) The method of claim 66, wherein said DNA plasmid is free from association with transfection-facilitating proteins, viral particles, and calcium phosphate precipitating agents.

Please substitute the following claim 72 for the pending claim 72:

72. (Once Amended) The method of claim 66, wherein said DNA plasmid is administered as a complex with one or more cationic lipids.

Please substitute the following claim 73 for the pending claim 73:

73. (Once Amended) The method of claim 72, wherein said complex further comprises one or more neutral lipids.

B10

Please substitute the following claim 74 for the pending claim 74:

74. (Once Amended) The method of claim 73, wherein said DNA plasmid is complexed with (±)-N-(2-hydroxyethyl)-N,N-dimethyl-2,3-bis(tetradecyloxy)-1-propaniminium bromide and 1,2-dioleoyl-glycero-3-phosphoethanolamine.

Please substitute the following claim 78 for the pending claim 78:

78. (Twice Amended) A method of transfecting malignant cells in a mammal, comprising:

administering into the peritoneal cavity of said mammal a DNA plasmid comprising a polynucleotide encoding interferon alpha, or an active fragment thereof, through operable association with a promoter, wherein said DNA plasmid is administered free from *ex vivo* cells or *ex vivo* cellular material; and wherein said plasmid is delivered to and expressed in malignant cells within said peritoneal cavity.

B11

Please substitute the following claim 83 for the pending claim 83:

83. (Once Amended) The method of claim 78, wherein said DNA plasmid is free from association with transfection-facilitating proteins, viral particles, and calcium phosphate precipitating agents.

B12

Please substitute the following claim 84 for the pending claim 84:

84. (Once Amended) The method of claim 78, wherein said DNA plasmid The method of claim 78, wherein said DNA plasmid is administered as a complex with one or more cationic lipids.

Please substitute the following claim 86 for the pending claim 86:

86. (Once Amended) The method of claim 85, wherein said DNA plasmid is complexed with (±)-N-(2-hydroxyethyl)-N,N-dimethyl-2,3-bis(tetradecyloxy)-1-propaniminium bromide and 1,2-dioleoyl-glycero-3-phosphoethanolamine.